

**EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	0	controller with template with (numeric near2 reference\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:56
S2	0	controller same template with (numeric near2 reference\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:56
S3	0	controller same template with (numeric\$5 near2 reference\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:57
S4	1	controller and template with (numeric\$5 near2 reference\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:57
S5	0	PLC same template with (numeric\$5 near2 reference\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:57
S6	0	PLC with (numeric\$5 near2 reference\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:57
S7	4635	(numeric\$5 near2 reference\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:57
S8	7	(numeric\$5 near2 reference\$1) with template\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:24
S9	0	(numeric\$5 near2 reference\$1) with (programm\$4 near3 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:58
S10	0	(numeric\$5 near2 reference\$1) with (programm\$4 near3 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 14:58

S11	18	(numeric\$5 near2 reference\$1) same (programm\$4 near3 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:00
S12	90	(numeric\$5 near2 reference\$1) and (programm\$4 near3 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:00
S13	1	((numeric\$5 near2 reference\$1) with select\$4) and (programm\$4 near3 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:01
S14	19	((numeric\$5 with reference\$1) with select\$4) and (programm\$4 near3 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:02
S15	20	((numeric\$5 with (reference\$1 pointer\$1)) with select\$4) and (programm\$4 near3 controller \$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:03
S16	63	(numeric\$5 with (reference\$1 pointer\$1) same (programm\$4 near3 controller\$1)) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:03
S17	3	(numeric\$5 with (reference\$1 pointer\$1) same (programm\$4 near3 controller\$1)).ab. and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:04
S18	0	(industrial and controller).ab. and (numeric\$5 with (reference \$1 pointer\$1) same (programm \$4 near3 controller\$1)) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:04
S19	6	(industrial and controller).ab. and (numeric\$5 with (reference \$1 pointer\$1) and (programm\$4 near3 controller\$1)) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:06
S20	8	(industrial and controller).ab. and (numeric\$5 with (reference \$1 pointer\$1) and (display\$ console\$3 templat\$4)) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:07
S21	16	(numeric\$5 with reference\$1) with template\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:24

S22	22173234	(numeric\$5 with reference\$1) with template\$3 same controllers and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:24
S23	0	(numeric\$5 with reference\$1) with template\$3 with controller \$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:24
S24	0	(numeric\$5 with reference\$1) with template\$3 same controller \$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:24
S25	2	(numeric\$5 with reference\$1) with template\$3 and controller \$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:25
S26	167	(numeric\$5 ) with template\$3 and controller\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:25
S27	17	(numeric\$5 ) with template\$3 same controller\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:26
S28	1069342	(industrial and controller\$3) and (numeric\$5 index\$3 ) with template\$3 controller\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:27
S29	65	(industrial and controller\$3) and (numeric\$5 index\$3 ) with template\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:27
S30	4	(industrial and controller\$3).ab. and (numeric\$5 index\$3 ) with template\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:21
S31	0	(industrial and controller\$3) same (numeric\$5 index\$3 ) with template\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:30
S32	38	(industrial and controller\$3) same (numeric\$5 index\$3 ) with display\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:21

S33	16	((industrial and controller\$3) PLC ).ab. and ((numeric\$4 index \$3) with parameters) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/19 15:32
S34	2	("6128653").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/21 22:07
S35	2	("6829709").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/22 10:52
S36	2	("6892240").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/22 10:53
S37	2	("6128563").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/22 10:53
S38	2	("6128653").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/22 10:53
S39	2	("6104716").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/22 15:57
S40	2	("6892240").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/22 15:57
S41	2	("5438622").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:20
S42	2	("6182163").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:20
S43	2	("5802073").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:21

S44	2	("6751213").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:22
S45	2	("5638384").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:22
S46	2	("6209039").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:22
S47	2	("5983275").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:23
S48	2	("5130859").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:24
S49	4	("4125763").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/24 14:24
S50	4279	(industrial and controller\$3).ab. and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:21
S51	1	(industrial and controller\$3).ab. and (add\$4 with aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:23
S52	0	(industrial and controller\$3) with (add\$4 with aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:23
S53	0	(industrial and controller\$3) same (add\$4 with aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:23
S54	2	(industrial and controller\$3) same (more with aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:27

S55	452	(industrial and controller\$3) and (more with aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:27
S56	3	(industrial and controller\$3).ab. and (more with aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:28
S57	0	(industrial and controller\$3).ab. and (add with aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:28
S58	0	(industrial and controller\$3).ab. and (add\$3 with aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:28
S59	1	(industrial and controller\$3).ab. and (add\$3 same aggregat\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:31
S60	3131179	(add\$3 with aggregat\$4 wiht component\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:32
S61	1993248	(additional aggregat\$4 withcomponent\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:32
S62	258	(additional with aggregat\$4 with component\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:32
S63	31	(additional with aggregat\$4 with component\$1)ab. and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:33
S64	1	(additional with aggregat\$4 with component\$1).ab. and controller and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:33
S65	5	(additional with aggregat\$4 with component\$1)same controller and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:34

S66	51	(additional with aggregate\$4) same controller and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:34
S67	51	(additional with aggregate\$4 ) same controller and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:34
S68	0	(additional with aggregate\$4 ) same controller same industrial and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:34
S69	19	(additional with aggregate\$4 ) same industrial and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:37
S70	74	(additional with industrial with controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:37
S71	11	(additional with industrial with controller\$1).ab. and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:42
S72	1	(additional with industrial with controller\$1 with increase\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:43
S73	3	(additional near2 industrial near3 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:47
S74	21	(additional near4 industrial near4 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 10:50
S75	60	(additional near4 controller\$1) same industrial and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 12:26
S76	2	("6201996").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/26 12:27

S77	58666	(addition\$3 with controller) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 12:49
S78	3271	(addition\$3 with controller with devices) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 12:50
S79	509733	(addition\$3 with controller with devices wit industrial) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 12:50
S80	9	(addition\$3 with controller with devices with industrial) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 13:40
S81	110	(addition\$3 with controller\$1 with industrial) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 13:40
S82	15	(addition\$3 with controller\$1 with industrial).ab. and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 13:43
S83	110	(addition\$3 with controller\$1 with industrial) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/10/26 13:46
S84	2	("9967724").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/26 14:24
S85	2	("5845149").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/26 14:37
S86	2	("20030004585").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/26 15:27
S87	2	("20030028889").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/26 15:27

S88	2	("6894972").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/27 20:14
S89	2	("20030043274").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/10/28 05:01
S90	5	(comunicat\$4 with (references)) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:18
S91	28716	"709"/\$.ccls. and (references) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:19
S92	79	"709"/\$.ccls. and negotia\$4 with (references) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:19
S93	0	"709"/\$.ccls. and (negotia\$4 with (references)).ab. and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:20
S94	0	"709"/\$.ccls. and negotia\$4 with (references) and industrial with controller and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:20
S95	24543886	"709"/\$.ccls. and negotia\$4 with (references) and PLC and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:20
S96	0	"709"/\$.ccls. and negotia\$4 with (references) and PLC and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:20
S97	1	negotia\$4 with (references) and PLC and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:20
S98	0	negotia\$4 with (references) and industrial near4 controller\$1 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:21

S99	1438	(references) and industrial near4 controller\$1 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:21
S100	157	(references) same industrial near4 controller\$1 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:22
S101	0	(references) with negotiat\$5 and aggregat\$4 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:23
S102	0	(references) with negotiat\$5 same packets and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:23
S103	3	(references) with negotiat\$5 same aggregat\$4 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:23
S104	269	negotiat\$5 and aggregat\$4 with packet\$1 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:27
S105	43	negotiat\$5 same aggregat\$4 with packet\$1 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:27
S106	1	negotiat\$5 same aggregat\$4 with packet\$1 and PLC and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:28
S107	27	negotiat\$5 same aggregat\$4 with packet\$1 and industrial and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/03/15 08:28
S108	1	("20030115340").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/03/18 15:03
S109	1	("6047331").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/03/18 15:04
S110	1	("20030115340").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/03/18 15:27
S111	21290	(optimiz\$4 with (object\$4 packet \$1)) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:26

S112	53	(optimiz\$4 with (object\$4 packet \$1)) and tags with responses and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:26
S113	0	(optimiz\$4 with (object\$4 packet \$1)).ab. and tags with responses and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:28
S114	0	(optimiz\$4 with (object\$4 packet \$1)).ab. and tags with (responses reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:28
S115	6	(optimiz\$4 with (object\$4 packet \$1)).ab. and tags same (responses reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:28
S116	8	(optimiz\$4 with (object\$4 packet \$1))same tags same (responses reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:37
S117	9	(optimiz\$4 with (object\$4 packet \$1))same (tags preferences) same (responses reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:39
S118	3	(optimiz\$4 with (object\$4 packet \$1))same (pointer\$1) same (responses reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:41
S119	215	(optimiz\$4 with (object\$4 packet \$1))and (pointer\$1) same (responses reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:46
S120	23	(optimiz\$4 with (object\$4 packet \$1)).ab. and (pointer\$1) same (responses reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 15:46
S121	8487	(pointer\$1) same (message\$1 reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 16:32
S122	4837	(pointer\$1) with (message\$1 reply\$4) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 16:32

S123	19	(pointer\$1) with (message\$1 reply\$4) and optimi\$4 near2 packets and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 16:32
S124	98	(pointer\$1) with (message\$1 reply\$4) and optimi\$4 with packets and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 16:54
S125	0	(pointer\$1) with (message\$1 reply\$4) same optimi\$4 with packets and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 16:55
S126	0	(pointer\$1) with (message\$1 reply\$4) with aggregat\$4 and optimi\$4 with packets and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 16:55
S127	0	(pointer\$1) with (message\$1 reply\$4) same aggregat\$4 and optimi\$4 with packets and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 16:55
S128	28	(pointer\$1) with (message\$1 reply\$4) and aggregat\$4 and optimi\$4 with packets and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/13 16:55
S129	53015	(indicat\$4 near3 address\$3) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/14 08:22
S130	3362	(indicat\$4 near3 address\$3) same updat\$4 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/14 08:23
S131	399	((indicat\$4 near3 address\$3) same updat\$4 near2 data) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/14 08:23
S132	47	((indicat\$4 near3 address\$3) same updat\$4 near2 data).ab. and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/14 08:23
S133	25	((indicat\$4 near3 address\$3 with (database memory buffer storage)) same updat\$4 near2 data).ab. and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/14 08:25

S134	2	("20020073211").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/05/16 15:28
S135	2	("6381617").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/05/16 15:28
S136	2	("5958064").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/05/16 15:28
S137	2	("5991750").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/05/16 15:28
S138	2	("6341285").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/05/16 15:29
S139	2	("20020087912").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/05/16 15:29
S140	4	("20020128946") or ("20020040304").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/05/16 16:28
S141	2	("6310941").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2008/05/16 16:28
S142	18	(numeric\$5 near2 reference\$1) same (programm\$4 near3 controller\$1) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:10

S143	0	S142 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:10
S144	0	S142 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:10
S145	18	(numeric\$5 with reference\$1) with template\$3 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:10
S146	0	S145 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:10
S147	677	"I18" and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:11
S148	9	(addition\$3 with controller with devices with industrial) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:12
S149	2	S148 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:12
S150	5	(additional with aggregat\$4 with component\$1)same controller and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:12
S151	2	S150 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:13
S152	52	(additional with aggregat\$41) same controller and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:13
S153	18	S152 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:13

S154	20	(additional with aggregat\$4 ) same industrial and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:13
S155	10	S154 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:13
S156	62	(numeric\$5 with (reference\$1 pointer\$1) same (programm\$4 near3 controller\$1)) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:14
S157	4	S156 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:14
S158	14	((industrial and controller\$3) PLC ).ab. and ((numeric\$4 index \$3) with parameters) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:14
S159	14	S158 and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:14
S160	1	S159 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:14
S161	27	negotiat\$5 same aggregat\$4 with packet\$1 and industrial and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:15
S162	0	S161 and @rlad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:15
S163	7	zink-steven-M.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:16
S164	12	baier-john-joseph.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:17

S170	39	Johnston-david-a.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/05/19 09:18
S171	1	("20010052089").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/05/19 12:37
S172	12309	(aggregat\$ with (data packet)) and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/29 17:23
S173	13	(aggregat\$ with (data packet)) same (buffer memory) same address\$1 same length and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/29 17:24
S174	24	(aggregat\$ adj3 (buffer memory)) same address\$1 same length and @ad<="20020306"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/29 17:36
S175	4432	(array same aggregat\$4) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 12:35
S176	474	(array same aggregat\$4 same length) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 12:36
S177	6	(array same aggregat\$4 same length same pointer) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 12:36
S178	0	(array near2 aggregat\$4 same length) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:46
S179	6486730	(array near2 aggregat\$4 same length) and (@ad<="20020306" @rlad<="20020306")j	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:46
S180	6486729	(array near2 aggregat\$4 with length) and (@ad<="20020306" @rlad<="20020306")j	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:47
S181	6486725	(array near2 aggregat\$4 with length).ab. and (@ad<="20020306" @rlad<="20020306")j	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:47

S182	7122023	(array near\$2 aggregat\$4 with length).ab. and (@ad<="20020306" @rlad<="20020306")j	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:47
S183	6486727	(aggregat\$4 with "length").ab. and (@ad<="20020306" @rlad<="20020306")j	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:48
S184	6487694	(aggregat\$4 with "length").ab. and (@ad<="20020306" @rlad<="20020306")j	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:49
S185	6486874	(aggregat\$4 with controller).ab. and (@ad<="20020306" @rlad<="20020306")j	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:49
S186	61	(aggregat\$4 near3 array).ab. and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:49
S187	0	(aggregat\$4 near3 array same length).ab. and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:50
S188	15	(aggregat\$4 near3 array).ab. and length and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:50
S189	20	(aggregat\$4 near3 array)same length and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 15:59
S190	2	(aggregat\$4 near3 array)same length same transmit\$4 and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 16:00
S191	14	(aggregat\$4 near3 array)same transmit\$4 and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 16:01
S192	156	(aggregat\$4 same array same buffer) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:51

S193	32	industrial and (aggregat\$4 same array same buffer) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:51
S194	3	plc and (aggregat\$4 same array same buffer) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:54
S195	59	plc and (aggregat\$4 same array ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:55
S196	0	plc same (aggregat\$4 same array ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:55
S197	0	plc and (aggregat\$4 same array same items) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:55
S198	0	plc and (aggregat\$4 same buffer \$4 same items) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:55
S199	232	plc and (aggregat\$4 same buffer \$4 ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:55
S200	4	plc same(aggregat\$4 same buffer\$4 ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:56
S201	776	(aggregat\$4 same buffer\$4 same types) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:57
S202	36	(aggregat\$4 same buffer\$4 same types).ab. and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:57
S203	65	(aggregat\$4 near3 buffer\$4 ). ab. and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:57

S204	3	(aggregat\$4 near3 buffer\$4 and transmitt\$4 ).ab. and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:58
S205	42	(aggregat\$4 near3 buffer\$4 same transmitt\$4 ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 18:59
S206	4	(aggregat\$4 near3 buffer\$4 same pointers same length ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:03
S207	5	(aggregat\$4 with buffer\$4 same pointers same length ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:10
S208	32	(aggregat\$4 same pointers same length ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:11
S209	12139	(aggregat\$4 same length ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:39
S210	127	(aggregat\$4 same length near5 array ) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:40
S211	3	(aggregat\$4 same length near5 array ).ab. and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:40
S212	8	(aggregat\$4 near4 data same length near5 array )and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:40
S213	127	(aggregat\$4 same length near5 array )and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:44
S214	6	(aggregat\$4 same length near5 array ) same transmi\$5 and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 19:45

S215	261	(aggregat\$4 same length same address) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 20:03
S216	8	(aggregat\$4 same length same address).ab. and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 20:03
S217	97	(aggregat\$4 same length same address)same (memory buffer array) and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 20:05
S218	19	(aggregat\$4 same length same address)same (memory buffer array) same transmit\$4 and (@ad<="20020306" @rlad<="20020306")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/11/09 20:05
S219	1	("20020120727").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/11/10 07:25
S220	1	("6894972").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/11/10 07:26
S221	1	("20020057446").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/11/12 06:36
S222	1	("20030110299").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/11/12 06:37
S223	1	("6060993").PN.	USPAT; USOCR	OR	OFF	2008/11/12 14:04

11/17/2008 1:04:20 PM

C:\Documents and Settings\ltruong6\My Documents\EAST\Workspaces\10092323.wsp